

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL
FORM

(to be used for all correspondence after initial filing)



Total Number of Pages in This Submission

Application Number	10/516,629
Filing Date	December 1, 2004
First Named Inventor	Detlef Muller-Schulte
Art Unit	1641
Examiner Name	Unsu Jung
Attorney Docket Number	BS0940US (#90713)

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below): prior art references and return postcard receipt
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature			
Printed name	Sean F. Mellino		
Date	10/13/06	Reg. No.	48,817

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Sean Mellino	Date	10/13/2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

Fee Transmittal For FY 2006

OCT 16 2006

PATENT & TRADEMARK OFFICE

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 180.00)

Complete if Known	
Application Number	10/516,629
Filing Date	December 1, 2004
First Named Inventor	Detlef Muller-Schulte
Examiner Name	Unsu Jung
Art Unit	1641
Attorney Docket No.	BS0940US (#90713)

METHOD OF PAYMENT (check all that apply)

Check Credit Card Money Order None Other (please identify): _____

Deposit Account Deposit Account Number: 08-2441 Deposit Account Name: D. Peter Hochberg Co., L.P.A.

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

Charge fee(s) indicated below Charge fee(s) indicated below, except for the filing fee

Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 3 (including Reissues)

Multiple dependent claims

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee Paid (\$)
- 20 or HP =	x	=		50	25

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee Paid (\$)
- 3 or HP =	x	=			

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	/ 50 =	(round up to a whole number) x 125.00	=	0.00

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): information disclosure statement

SUBMITTED BY

Signature	Sean F. Mellino	Registration No. (Attorney/Agent)	48,817	Telephone	216-771-3800
Name (Print/Type)	Sean F. Mellino			Date	October 13, 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

CERTIFICATE OF MAILING

I hereby certify that this document is being deposited with the United States Postal Service as First Class mail in an envelope addressed: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia, 22313-1450, on the date noted below:

10/13/06

Date:



Sean Mellino

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Detlef Müller-Schulte

Serial No. : 10/516,629 / Conf. No. 4567

Filing Date : December 1, 2004

Examiner / Group Art Unit : Unsu Jung / 1641

Title : THERMOSENSITIVE POLYMER CARRIER
WITH CHANGEABLE PHYSICAL STRUCTURE
FOR BIOCHEMICAL ANALYSIS,
DIAGNOSTICS AND THERAPY

Attorney File : BS0940US (#90713)

**INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 CFR 1.97**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir,

Under the provision of 37 C.F.R. 1.56, 1.97 and 1.98, Applicant would like to call the Examiner's attention to the references listed on the attached Form PTO-1449. Copies of any U.S. patent references are not enclosed. Copies of the non-U.S. patent references are enclosed. Copies of the non-patent references will follow.

In accordance with 37 C.R.F. 1.97(b)(1), and as this Information Disclosure

Statement is being filed after the issuance of a first Office action on the merits of the
10/17/2006 WASFAW1 00000030 10516629

01 FC:1806

180.00 0P

application, but before the issuance of a Final Office action, the fee set forth in Sec. 1.17(p) is also enclosed herewith.

In accordance with 37 C.F.R. 1.97(g) and 37C.F.R.1.97(h), filing of this Information disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in 34 C.F.R. 1.56(b).

The Examiner is requested to make the attached references of record and to consider these references along with such other references deemed pertinent as a result of the Examiner's own independent search and examination.

Respectfully submitted,

10/13/06



Sean F. Mellino

Reg. No. 48,817

D. Peter Hochberg Co., L.P.A.
1940 E. 6th Street - 6th Floor
Cleveland, OH 44114
(216) 771-3800
SFM/SM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Detlef Müller-Schulte
Serial No. : 10/516,629 / Conf. No. 4567
Filing Date : December 1, 2004
Examiner / Group Art Unit : Unsu Jung / 1641
Title : THERMOSENSITIVE POLYMER CARRIER
WITH CHANGEABLE PHYSICAL STRUCTURE
FOR BIOCHEMICAL ANALYSIS,
DIAGNOSTICS AND THERAPY
Attorney File : BS0940US (#90713)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

U S PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name
_____	3,215,572	11/2/65	Papell
_____	3,652,761	3/28/72	Weetall
_____	3,917,538	11/4/75	Rosensweig
_____	3,970,518	7/20/76	Giaevers
_____	4,070,246	1/24/78	Kennedy, et al.
_____	4,115,534	9/19/78	Ithakissios
_____	4,169,804	10/2/79	Yapel, Jr.
_____	4,230,685	10/28/80	Senyei, et al.

_____	4,247,406	1/27/81	Widder, et al.
_____	4,267,234	5/12/81	Rembaum
_____	4,329,241	5/11/82	Massart
_____	4,345,588	8/24/82	Widder, et al.
_____	4,357,259	11/2/82	Senyei, et al.
_____	4,369,226	1/18/83	Rembaum
_____	4,452,773	6/5/84	Molday
_____	4,609,707	9/2/86	Nowinski, et al.
_____	4,628,037	12/9/86	Chagnon, et al.
_____	4,647,447	3/3/87	Gries, et al.
_____	4,654,267	3/31/87	Ugelstad, et al.
_____	4,662,359	5/5/87	Gordon
_____	4,675,173	6/23/87	Widder
_____	4,735,796	4/5/88	Gordon
_____	4,752,638	6/21/88	Nowinski, et al.
_____	4,780,409	10/25/88	Monji, et al.
_____	4,783,409	11/8/88	Tosa, et al.
_____	4,827,945	5/9/89	Groman, et al.
_____	4,832,466	5/23/89	Nishimura, et al.
_____	4,861,705	8/29/89	Margel
_____	4,912,032	3/27/90	Hoffman, et al.
_____	4,965,007	10/23/90	Yudelson
_____	5,013,669	5/7/91	Peters, Jr., et al.

_____	5,053,228	10/1/91	Mori, et al.
_____	5,141,740	8/25/92	Rajagopalan, et al.
_____	5,221,322	6/22/93	Tokuoka, et al.
_____	5,226,902	7/13/93	Bae, et al.
_____	5,252,318	10/12/93	Joshi, et al.
_____	5,441,732	8/15/95	Hoeg, et al.
_____	5,451,411	9/19/95	Gombotz, et al.
_____	5,453,186	9/26/95	Muller, et al.
_____	5,492,814	2/20/96	Weissleder
_____	5,599,534	2/4/97	Himmelstein, et al.
_____	5,618,800	4/8/97	Kabra, et al.
_____	5,674,521	10/7/97	Gehrke, et al.
_____	5,711,884	1/27/98	Asher, et al.
_____	5,753,261	5/19/98	Fernandez, et al.
_____	5,840,338	11/24/98	Roos, et al.
_____	5,854,078	12/29/98	Asher, et al.
_____	5,898,004	4/27/99	Asher, et al.
_____	5,939,485	8/14/99	Bromberg, et al.
_____	5,998,588	12/7/99	Hoffman, et al.
_____	6,014,246	1/11/2000	Asher, et al.
_____	6,020,210	2/1/2000	Miltenyi
_____	6,094,273	7/25/2000	Asher, et al.
_____	6,097,530	8/1/2000	Asher, et al.

_____	6,160,084	12/12/2000	Langer, et al.
_____	6,165,389	12/26/2000	Asher, et al.
_____	6,187,599	2/13/2001	Asher, et al.
_____	6,361,944	3/26/2002	Mirkin, et al.
_____	6,428,811	8/6/2002	West, et al.
_____	6,544,800	4/8/2003	Asher
_____	6,645,517	11/11/2003	West, et al.

U.S. Published Applications

Examiner Initial	Document Number	Date	Name
_____	20010014468	8/16/2001	Muller-Schulte
_____	20010026946	10/4/2001	Asher
_____	20020031841	3/14/2002	Asher, et al.
_____	20020032246	3/14/2002	Asher, et al.
_____	20020169235	11/14/2002	West, et al.
_____	20060057192	3/16/2006	Kane

Foreign Patent Documents

Examiner Initial	Document Number	Date	Country	Translation (Yes/No)
_____	EP0275285	7/27/88	EPO	No
_____	EP0586052	3/9/94	EPO	No
_____	DE3502998	7/31/86	Germany	Yes
_____	DE3508000	9/4/86	Germany	Yes

_____	DE3811042	10/19/89	Germany	Yes
_____	DE3933210	4/11/91	Germany	Yes
_____	DE4129901	3/11/93	Germany	Yes
_____	DE4201461	7/22/93	Germany	Yes
_____	DE4412651	10/19/95	Germany	Yes
_____	DE19800294	7/8/99	Germany	Yes
_____	WO 8911154	11/16/89	WO	No
_____	WO 9007380	7/12/90	WO	No
_____	WO 9222201	12/23/92	WO	No
_____	WO 9704862	2/13/97	WO	No
_____	WO 9962079	12/2/99	WO	No
_____	WO 0105586	1/25/01	WO	No
_____	WO 03026618	4/3/2003	WO	No

Other Prior Art (Inc. Author, Title, Date, Pertinent Pages, Etc) ***

<u>Examiner Initial</u>	<u>Document</u>
_____	Ackerman, et al., <i>J. Histochem. Cytochem.</i> , Vol. 31, 433 (1983)
_____	Asano, et al., <i>Polym. Gels & Networks</i> , Vol. 3, 281 (1995)
_____	Birell, et al., <i>J. Histochem. Cytochem.</i> , Vol. 35, 843 (1987)
_____	Buske, et al., <i>Colloids & Surfaces</i> , Vol. 12, 195 (1984)
_____	Chu, et al., <i>Polym. Bull.</i> , Vol. 44, 337 (2000)
_____	Ebara, et al., <i>J. Appl. Polymer Sci.</i> , Vol. 39, 335 (2001)
_____	Englebienne, <i>Analyst</i> , Vol. 123, 1599 (1998)

____ Gan and Lyon, *J. Am. Chem. Soc.*, Vol. 123, 7517 (2001)

____ Geoghagen, et al., *J. Histochem. Cytochem.*, Vol. 24, 1187 (1977)

____ Gilány, et al., *Langmuir*, Vol. 17, 4764 (2001)

____ Gupta, et al., *Biomacromolecules*, Vol. 2, 239 (2001)

____ Häfeli, et al., *Scientific and Clinical Applications of Magnetic Carriers*, Hrsg., Plenum Press, NY (1997)

____ Hermanson, G.T., *Bioconjugate Techniques*, Academic Press, San Diego, CA (1996)

____ Hoy, K.L., *Tables of Solubility Parameters*, Union Carbide Corp., South Charleston (1969)

____ Hua, et al., *J. Mater. Sci.*, Vol. 36, 731 (2001)

____ *Int. J. of Hyperthermia*, Vol. 9, 51 (1993)

____ Johansson and Mosbach, *Biochem. Biophys. Acta*, Vol. 370, 399 (1974)

____ Jones and Lyon, *Macromolecules*, Vol. 33, 8301 (2000)

____ Jordan, et al., *J. Magnet. Mag.*, Vol. 225, 118 (2001)

____ Kaiser and Miskolczy, *J. Appl. Phys.*, Vol. 413, 1064 (1970)

____ Kanazawa, et al., *Anal. Sci.*, Vol. 18, 45 (2002)

____ Kang, et al., *Chem. Mater.*, Vol. 8, 2209 (1996)

____ Khalafalla and Reimers, *IEEE Transn. Magn.*, Vol. 16, 178 (1980)

____ Köhler, et al., *Sensors & Actuators B*, Vol. 76, 166 (2001)

____ Kondo and Fukuda, *J. Ferment. Bioeng.*, Vol. 84, 337 (1997)

____ Kondo, et al., *Appl. Microbiol. Biotechnol.*, Vol. 41, 99 (1994)

____ Kriwet, et al., *J. Contr. Release*, Vol. 56, 149 (1998)

____ Lee and Chen, *J. Appl. Polymer Sci.*, Vol. 82, 2487 (2001)

____ Lee, et al., *IEEE Transn. Magn.*, Vol. 28, 3180 (1992)

____ Li, et al., *J. Microencapsulation*, Vol. 15, 163 (1998)

____ Li, et al., *Radiat. Phys. Chem.*, Vol. 55, 173 (1999)

____ Maolin, et al., *Radiat. Phys. Chem.*, Vol. 57, 481 (2000)

____ Masuko, et al., *Biol. Pharm Bull.*, Vol. 18, 1802 (1995)

____ Matsuoka, et al., *Polym. Gels & Networks*, Vol. 6, 319 (1998)

____ *Methods in Enzymology*, Vol. 112, Part A, Widder and Green Hrsg., Acad. (1987)

____ *Methods of Enzymology*, Mosbach Hrsg., Vol. 135, Part B, Academic Press Press, Inc., Orlando, FL (1995)

____ Mitsumori, et al., *Int. J. of Hyperthermia*, Vol. 10, 785 (1994)

____ Moeremans, et al., *Anal. Biochem.*, Vol. 145, 315 (1985)

____ *Monoclonal Antibodies and Cancer Therapy*, UCLA Symposia on Molecular and Cellular Biology, Reisfeld and Sell, Hrsg., Alan R. Riss, Inc., NY (1985)

____ Müller-Schulte and Brunner, *J. Chromatogr*, Vol. 711, 53 (1995)

____ Müller-Schulte and Horster, *Polymer Bull.*, Vol. 7, 77 (1982)

____ Müller-Schulte and Thomas, *Radiat. Phys. Chem.*, Vol. 35, 93 (1990)

____ Müller-Schulte, *Radiat. Phys. Chem.*, Vol. 42, 891 (1993)

____ Park and Hoffman, *J. Biomed. Mat. Res.*, Vol. 24, 21 (1990)

____ Quellec, et al., *J. Biomed. Mat. Res.*, Vol. 42, 45 (1998)

____ Sato, et al., *J. Magn. Magn. Mat.*, Vol. 65, 252 (1987)

____ Sayil and Okay, *Polym. Bull.*, Vol. 45, 175 (2000)

____ Serizawa, et al., *Macromolecules*, Vol. 35, 10 (2002)

____ Shinkai, et al., *Biocatalysis*, Vol. 5, 61 (1991)

____ Stöber, et al., *J. Colloid Interface Sci.*, Vol. 26, 62 (1968)

____ Tripathy, et al., *J. Appl. Polymer Sci.*, Vol. 81, 3296 (2001)

____ *Ullmanns Enzyklopädie der Technischen Chemie*, 4, Aufl., Bd. 10

____ Wang, et al., *Histochem.*, Vol. 83, 109 (1985)

____ Wang, et al., *J. Am. Chem. Soc.*, Vol. 123, 11284 (2001)

____ West and Halas, *Curr. Opinion Biotechn.*, Vol. 11, 215 (2000)

____ Xue, et al., *Polymer*, Vol. 42, 3665 (2001)

____ Zhang and Zhuo, *Eur. Polym. J.*, Vol. 36, 2301 (2000)

____ Zhang, et al., *Langmuir*, Vol. 18, 2013 (2002)

____ Zhu and Napper, *Langmuir*, Vol. 16, 8543 (2000)

Examiner

Date Considered:

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant

*** It is noted that copies of the references listed under the section "Other Prior Art" will follow.